WHAT IS CLAIMED IS:

1. A method of manufacturing an inductor component containing a drum magnetic core made of a magnetic material having a structure including integrated flanges at both ends of a columnar material, a coil wound around the columnar material in the drum magnetic core and placed between the flanges, and a permanent magnet placed in the neighborhood of the drum magnetic core with the coil wound around, comprising the steps of:

fitting a sleeve core to the outside of the drum magnetic core; and

placing the permanent magnet in at least one gap in a closed magnetic circuit formed with the drum magnetic core and the sleeve core in order to apply a direct-current magnetic field in the direction opposite to the direction of a magnetic field generated by a magnetomotive force due to the coil.

2. The method according to Claim 1, further comprising the step of forming the permanent magnet from a complex made by dispersing a magnetic powder in a resin or by mixing the resin and the magnetic powder.

3. The method according to Claim 2, further comprising the step of making the complex by coating the gap with a viscous material of the resin and the magnetic powder and, thereafter, performing heat-curing.

4. The method according to Claim 2, further comprising the step of magnetizing the complex on a magnetic core basis.

5. The method according to Claim 2, wherein the resin comprises at least one resin selected from the group consisting of poly(amide-imide) resins, polyimide resins, epoxy resins, poly(phenylene sulfide) resins, silicone resins, polyester resins, aromatic polyamide resins, and liquid crystal polymers.

6. The method according to Claim 2, wherein the magnetic powder is a rare-earth magnet powder having an intrinsic coercive force $H_c$ of 7.9 x $10^5$ (A/m) or more, a Curie temperature $T_c$ of 500°C or more, and an average powder particle diameter of 2.5 to 25 μm.

7. The method according to Claim 2, wherein the surface of the magnetic powder is coated with at least one metal selected from the group consisting of Zn, Al, Bi, Ga, In, Mg, Pb, Sb, and Sn or an alloy.

8. The method according to Claim 7, wherein the magnetic powder coated with the metal or alloy is further coated with at least a nonmetallic inorganic compound having a melting point of 300°C or more.

9. The method according to Claim 8, wherein the addition amount of the nonmetallic inorganic compound is within the range of 0.1 % to 10% on a volume ratio basis.

10. The method according to Claim 2, wherein the content of the resin is 30% or more on a volume ratio basis, and the resistivity of the complex of the resin and the magnetic powder is 0.1 Ωcm or more.

11. The method according to Claim 2, wherein the magnetic powder has a composition of $Sm(Co_{bal.}Fe_{o.15\ to\ 0.25}Cu_{0.05\ to\ 0.o6}Zr_{o.o2\ to\ 0.03})_{7.0\ to\ 8.5}$.

12. The method according to Claim 2, further comprising the step of coating the magnetic powder with inorganic glass having a softening point of 220°C or more, but 550°C or less.

13. The method according to Claim 12, wherein the addition amount of the inorganic glass is within the range of 0.1 % to 10% on a volume ratio basis.

14. The method according to Claim 2, wherein the magnetic powder is subjected to a surface treatment with a silane coupling agent, titanium coupling agent, or other dispersing agent before the magnetic powder is mixed with the resin or is dispersed in the resin.

15. The method according to Claim 2, further comprising the step of making the permanent magnet by orientating the magnetic powder in the direction of the thickness with a magnetic field so as to have magnetic anisotropy.

16. The method according to Claim 1, further comprising the step of magnetizing the permanent magnet at a magnetizing magnetic field of 2.5 T or more.

17. The method component according to Claim 1, wherein the permanent magnet has a center line average roughness Ra of 10 [Lm or less.